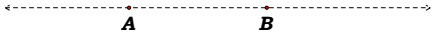
Recursion

Our first recursion, known as complete induction and deduction, of our binary actually takes place by our ability to put it into one system of grammar, the grammar of our own behavior with our own hand: Geometry.

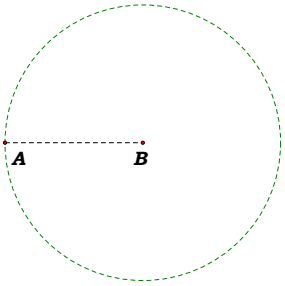
Recursion is afforded by Complete Induction and Deduction. Induction and Deduction are effected by both noun and verb producing; addition, subtraction, multiplication and division. The recursion of these will yield even more specific tools.

Starting with Geometry, we noted our second example of recursion, writing our First Principle Thing realizing that it is a memory stick of the application of correlatives:

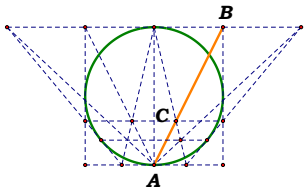
Recursion is two kinds, explicit, for example, we can always make our FPT. The second is implicit, i.e., we could choose to have made the FPT any size we wished, i.e., we could have stopped our hand anywhere in construction, and we can place any number of correlatives within that same difference. The first method, is also called induction, establishing the perceptible. The second is called Deduction, using what we have to proceed with reasoning, again, managing the given data. Let us examine more sophisticated methods of recursion using our FPT.



What I am going to write are possible methods of recursion, both effecting deduction and induction. One of the items a compass affords us is memory not only of our FPT but also immediate recursion from either correlative which denotes that unit becomes also a container.

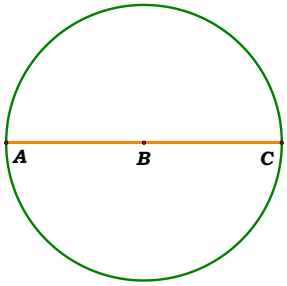


We can also produce what is called the circle at least two different ways using just lines, and writing it as a function of lines. In other words, we can learn about the universe of discourse, by exhaustive use of the unit, itself. So, we can denote it first, or learn of it last. One way is with a unit line, the other is produced with an infinite line, as a reciprocal. One can say that beyond small and great, is the circle. A circle is the reciprocal of the line. Or again, the verb is the reciprocal of the noun, and the noun is the reciprocal of the verb.

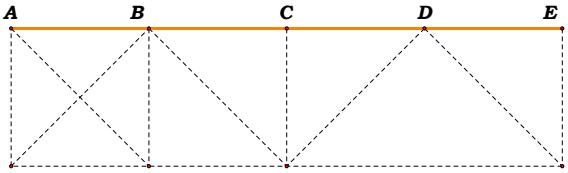


Perhaps it is well that this was not discovered first, as there would be those claiming that the only tool used in geometry is a straightedge, without paper. So, no, a compass is not just for drawing circles, nor are straight lines the only possible loci for the assertion of correlatives. And since the equation for the figure can also produce an ellipse, so no, an ellipse is not produced by cutting through an ice cream cone even if it is the right flavor or not. And as you can see, all of geometry is effected by binary recursion, not the tools which aid us in writing in the grammar. I need a break. Do I say I squared a circle, or bounced around a square cage? At any rate, do not show stupidity claiming that a geometric construction is Euclidean, unless by choice, or the product of two tools made optional by a digital environment. Or, I can say the circle exists a priori in the realm of the unenlightened flat screen; if I had a tire pump to inflate myself. Or provably, I walked straight on forever, and eventually found myself back home again.

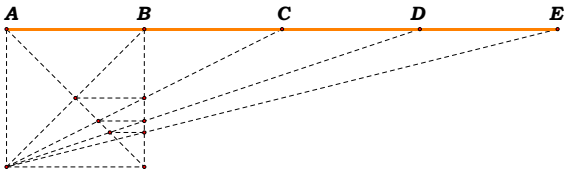
Another way to produce recursion, using the compass is in this wise. This produces arithmetic induction.



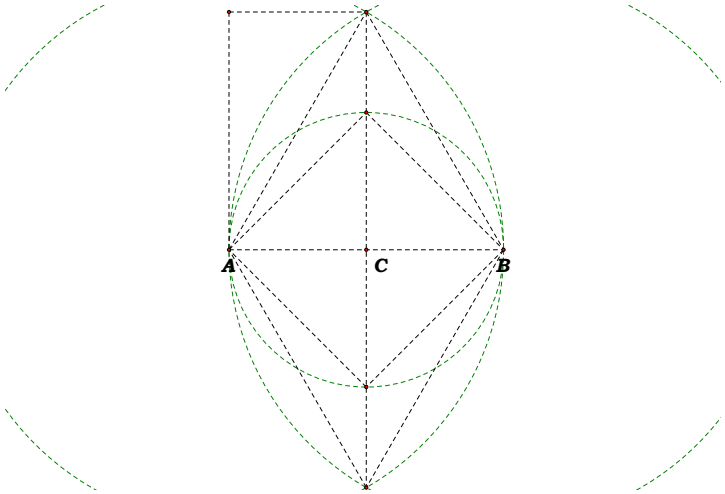
Demonstrated with just a straightedge



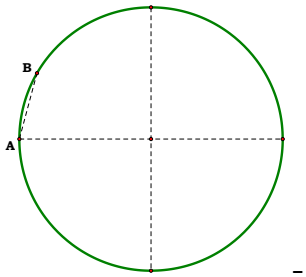
An example of using straight lines and proportion



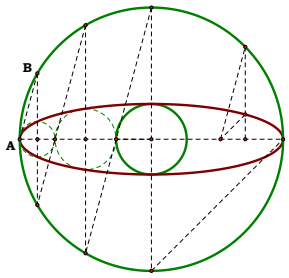
Recursion by deduction leads to an interesting figure:



The figure presents us with all the fundamental topics of Euclid's presentation of the elements. However, something is missing, and apparently has been missing since the dawn of geometry, for when I once read an algebra book, the author claimed that exponential notation was not geometrically demonstrable, that it was a pure conceptual abstraction, which, frankly, is impossible, at least to me, for early on in my investigations, I was demonstrating it.

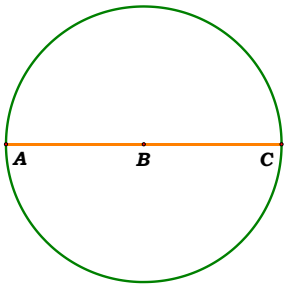


With only a straightedge, divide the circle by AB.

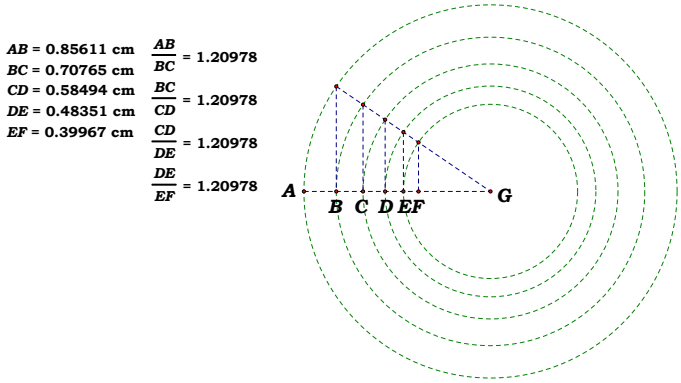


I not only divided it arithmetically, but geometrically as well, and only using a straightedge. Thus, we see, before our eyes, that working with angles is only the product of a more advanced method of effecting arithmetic by the hand. With the straightedge, I a made a tool which produced the ellipse using the proportion expressed by the angle of AB. And we see the diameter, divided by equal angles, which is really advanced arithmetic. Imagine that, dividing a straight line by equal angles.

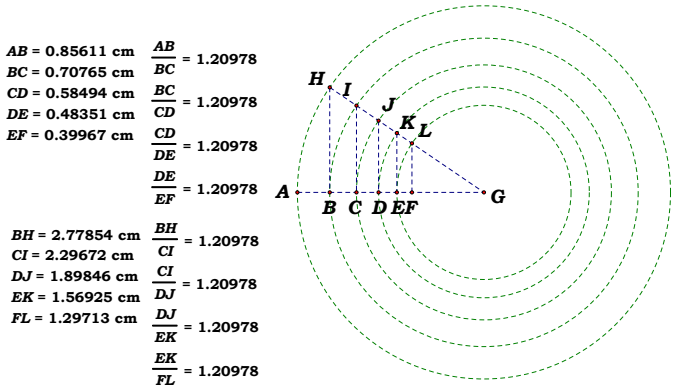
So far, in the above forms of recursion, we find one missing, for all of the results are actually arithmetic recursion. What is the mistake? How do we show the geometric recursion of the circle?



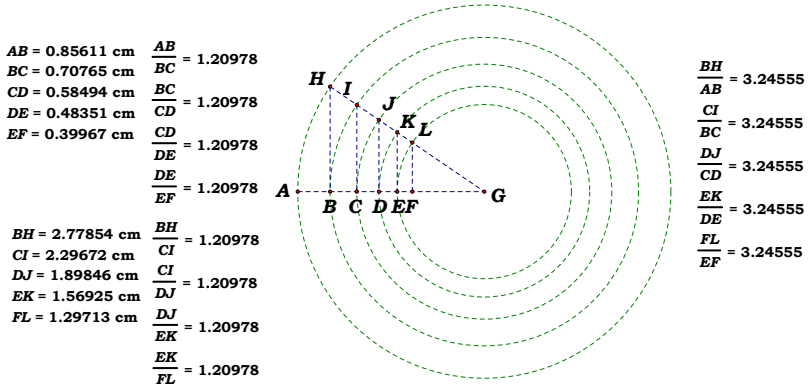
The above figure shows how to use the circle for arithmetic induction producing an arithmetic progression, and we can recursively apply the circle in that manner, but what constitutes the recursion of the circle deductively, geometrically? And since it has apparently been a thorn in geometer's side for so long, let me show it step by step where, given a circle we are going to add another line within the circle and learn geometric recursion.



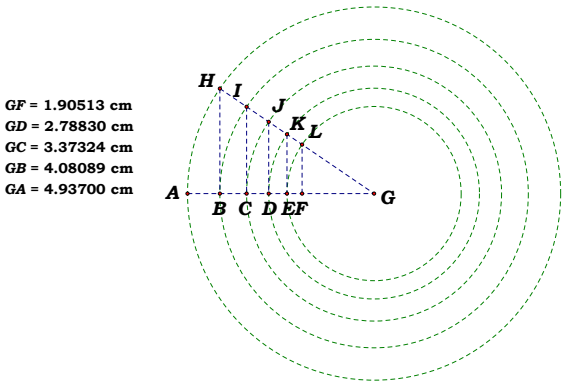
We find we have another kind of unit called a geometric ratio, where in primitive times it was called an angle, and it was in the opening book of Euclid, defined as a ratio, i.e. geometric, not arithmetic, which readers quickly forgot. In the Elements of Euclid, it is defined as an inclination between two lines, i.e. a ratio which is not what people consider an angle to be today, where it is something mystical emanating from a not thing, a single and lonely correlative called a vertex or point. Current so-called teaching, does not account for the hole in the idea, the missing second correlative.



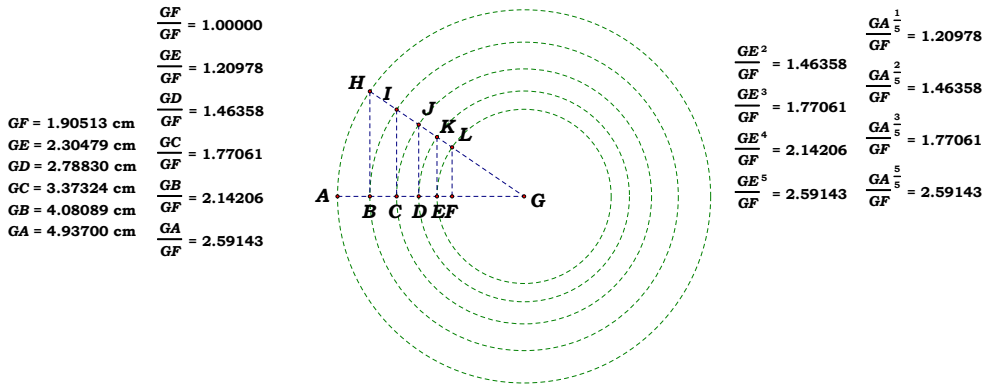
And, if we compare the lines vertically, they are in the exact same ratio.



The inclination actually turns out to be 3.24555 in this example and it has absolutely nothing to do with the antiquated concept of degree which is just a an agreed upon number by illiterates. Once we have our Geometric unit of progression, we can pair it to an arithmetic progression. Let us take what remains, FG and call it a unit.

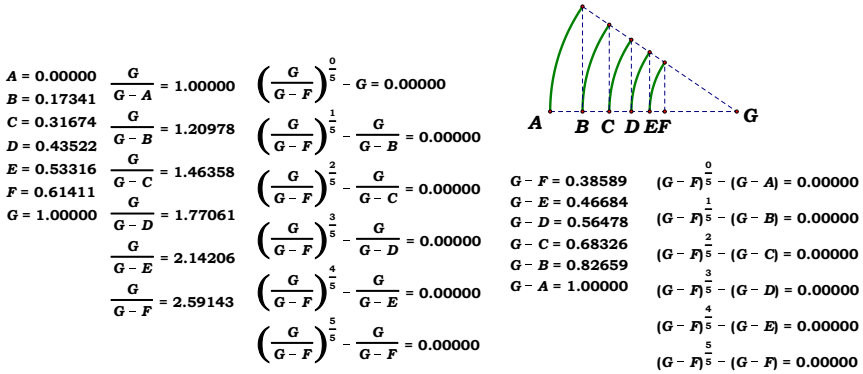


Using any system of measure, we desire; we note the differences. If GF is our unit, we convert the series into that unit like this.



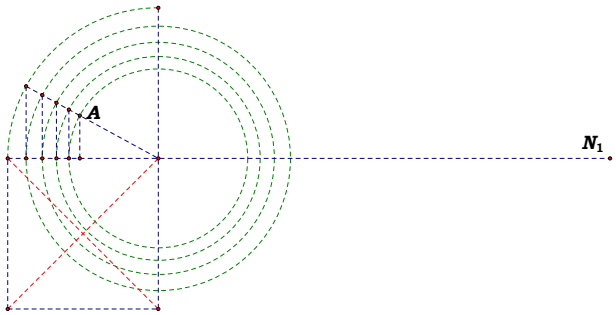
Thus, the only difference between powers and roots, is the direction one is reading from. So, all the properties of exponents are easily demonstrable in geometry, the only question which is at the top of the list is, how does one pair an arithmetic progression with a geometric progression, by way of each's unit?

Lastly we conclude:

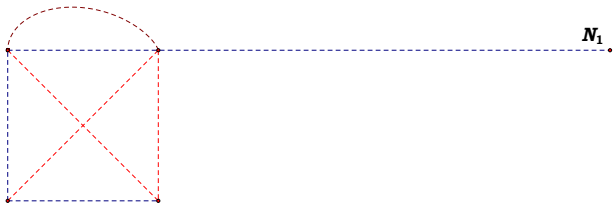


You find today, in elementary Algebra, the explicit, or implicit statements that exponential manipulation is not possible in geometry, that it is a product of inexplicable human genius. So, what does it mean when scientist all over the world believe that they can predict the birth, life and death of the Universe, but cannot predict the behavior of a simple straightedge and compass, the product of a simple line and circle? It is called schizophrenia, even megalomania. Parroting, mixed with mythology, is symptomatic of a dysfunctional mind. Am I Superman, waiting for his outfit to be returned from the cleaners, so I can go out and buy a ticket to board a flying rock to other dimensions? Or am I just another ape scratching his head?

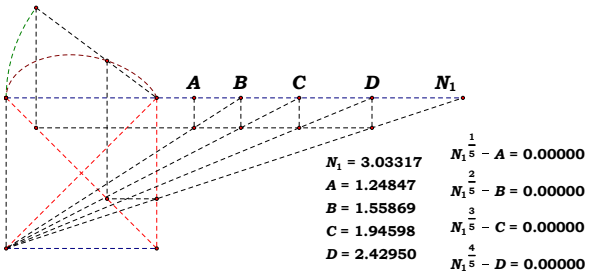
As geometry is that grammar by which one can demonstrate Total Recall by Total Memory, how do we produce that memory for exponential progressions?



I first decide how many geometric units I want to record; I will stay with five; the only point I need to record then is A.

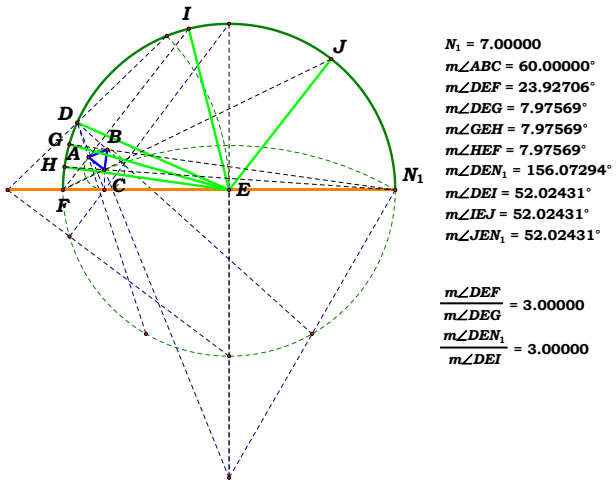


Ignoring everything else but the result, we can now use it to form a fifth exponential series with any N as such. Notice it is not a power or a root, but a fifth in a series.



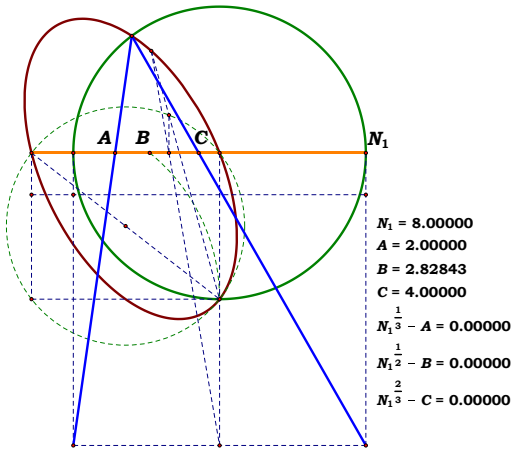
Thus, any geometric series can be applied to any arithmetic. Any claim that I can record and recall or some correlatives by some custom, making a thing different from itself, is just absurd.

In all of this, I am not saying that there are no methods of applying the division of the circumference arithmetically: It actually can be done if one is willing to take the time to work out each figure. However, again, what you find in literature is the simple minded conchoid, not the relationship between actual induction and deduction of the unit, as in the following figure.



However, it too depends upon proportion, but not a good figure for explaining elementary recursion. One can, however, also use memory to find 1 degree, or a portion of it. What use it has, I can not say but one can spend a lot of time slicing and dicing circles.

And I have also shown a rude solution to the Delian problem which again, is not elementary:



Nor perhaps is it very useful as a topic of Metaphysics at this time.

Now, if one is able to wrap their brain around the elementary ideas of Metaphysics, actually demonstrated, the next step is rather mundane, demonstrating simple mathematical operations with our Grammar Matrix.